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SEARING SENTIMENT OR COLD CALCULATION? THE EFFECTS OF LEADER EMOTIONAL DISPLAYS ON TEAM PERFORMANCE DEPEND ON FOLLOWER EPISTEMIC MOTIVATION

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We examined how leader emotional displays affect team performance. We developed and tested the idea that effects of leader displays of anger versus happiness depend on followers' epistemic motivation, which is the desire to develop a thorough understanding of a situation. Experimental data on four-person teams engaged in an interdependent team task showed that teams with higher epistemic motivation performed better when their leaders displayed anger (mediated by team members' performance inferences), whereas teams with lower epistemic motivation performed better when the leaders expressed happiness (mediated by team members' affective reactions). Theoretical contributions and managerial ramifications are discussed.

Emotions are omnipresent in leader-follower interactions, both arising from and exerting influence on these interactions (Rubin, Munz, & Bommer, 2005; Sy, Côté, & Saavedra, 2005). Because leaders have a profound impact on the functioning of organizations and their members (Yukl, 2005), leader emotional displays have strong potential to influence the way their subordinates feel, think, and act (George, 2000). It is therefore critical to understand *how* leader emotional displays affect subordinates and, thereby, an organization's productivity. Re-

search on this topic is sparse, and the studies that have been conducted have yielded inconsistent findings. On the one hand, several studies have reported beneficial effects of positive emotional displays on ratings of leader negotiating latitude (Newcombe & Ashkanasy, 2002), evaluations of leader effectiveness (Gaddis, Connelly, & Mumford, 2004), and ratings of charisma (Bono & Ilies, 2006), team coordination (Sy et al., 2005), and performance (Gaddis et al., 2004; George, 1995). Conversely, negative emotional displays have been found to reduce perceptions of leader effectiveness (Glomb & Hulin, 1997; Lewis, 2000). Thus, several studies suggest that positive rather than negative leader emotional displays are conducive to organizational functioning.

On the other hand, however, there is evidence that negative emotional displays may be more effective. For instance, Sy et al. (2005) found that teams with a leader in a negative mood expended

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more effort than did teams with a leader in a positive mood. Other work has indicated that a leader's displays of anger enhance followers' perceptions of the leader's competence and status (Tiedens, 2001), especially for male leaders (Lewis, 2000). Furthermore, displays of anger are often more effective in eliciting desired behavior than neutral or happy displays (Van Kleef, De Dreu, & Manstead, 2004a). Indeed, managers sometimes deliberately feign anger in order to influence subordinates (Fitness, 2000)—an observation that is compatible with theorizing about the strategic presentation of anger as a social influence tactic (Ostall, 1996).

These disparate past findings present a puzzle that is as yet unresolved: What should leaders do, express positive emotions or negative emotions? In an attempt to reconcile inconsistent past findings and enhance understanding of the consequences of leader emotional displays, we draw on the emotions as social information (EASI) model (Van Kleef, 2008, *in press*), which suggests that a leader's emotional displays affect team performance through two distinct pathways. As we explain below, one path involves followers' affective reactions to the leader's emotional displays, and the other path involves effects of the leader's emotional displays on followers' inferences regarding the quality of their performance. We argue that the two processes operate under different circumstances. Specifically, we build on information processing models to predict that the relative strength of the two paths depends on team members' information processing motivation. In light of the increasing prevalence and importance of teams in organizations (Ilgen, Hollenbeck, Johnson, & Jundt, 2005), we consider the effects of leader emotional displays on team performance rather than on individual performance. Thus, we contribute to the relevant literature by specifying when positive versus negative leader emotional displays lead teams to perform better.

We decided to focus our analysis on anger and happiness. Several considerations informed this decision. First, anger and happiness are likely to arise in the context of leader-follower interactions and (un)satisfactory team performance (Fitness, 2000; Glomb & Hulin, 1997; Lewis, 2000). Second, anger and happiness are "basic emotions" that are similarly expressed across cultures and recognized universally (Ekman, 1993), features that enhance the generalizability of any findings to other cultures. Third, comparing anger (which has a negative valence) and happiness (a positive valence) allowed us to connect to previous work that has compared positive and negative emotional displays (e.g., Sy et al., 2005). Fourth, anger and happiness are characterized by similar arousal levels (Bar-

sade, 2002; Russell & Feldman Barrett, 1999), which allows for an unconfounded comparison of positive and negative emotional displays. A comparison between, for instance, happiness (high arousal) and disappointment (low arousal) would confound valence with arousal and blur understanding of any effects.

Before outlining the two paths to emotional influence in leadership that are featured in our model, we first discuss in more general terms the main social functions of emotional displays that serve as the theoretical background of our analysis.

THEORETICAL DEVELOPMENT AND HYPOTHESES

A Social-Functional Approach to Emotion

The social-functional approach to emotion focuses on how one individual's emotional displays may influence others' cognitions, impressions, and behavior (Keltner & Haidt, 1999). The basic premise of this perspective is that emotions have important social functions and consequences by which they influence not only the behavior of those experiencing the emotions but also the behavior of others (Van Kleef, *in press*). First, emotional displays often evoke affective reactions in others (such as "emotional contagion" [Hatfield, Cacioppo, & Rapson, 1992]) that help them to respond to significant events (Keltner & Haidt, 1999). For example, anger in one person may evoke negative affective reactions in another, and happiness may induce positive affective reactions. Second, emotions are communications (Schwarz & Clore, 1983) conveying information about how one feels about things (Ekman, 1993), about one's social intentions (Fridlund, 1994; Van Kleef, De Dreu, & Manstead, 2004a), and about one's orientation toward other people (Hess, Blairy, & Kleck, 2000). By carrying such information, emotional displays also serve as incentives or deterrents for other individuals' behavior. For instance, displays of anger may signal that behavioral adjustment is desired, whereas displays of happiness may encourage others to pursue their course of action (Cacioppo & Gardner, 1999).

Two Paths to Emotional Influence

Integrating the aforementioned social functions of emotions, the EASI model (Van Kleef, 2008, *in press*) points to two ways in which a leader's emotional displays may influence team performance. On the one hand, these emotional displays may affect performance by evoking affective reactions in team members that may influence their perfor-

mance. On the other hand, a leader's emotional displays may influence performance by providing task-relevant information that teams use to guide their performance.

The affective reactions pathway. Emotional displays can elicit affective reactions in others that may subsequently affect their behavior (Kelly & Barsade, 2001; Van Kleef, in press). Such affective reactions typically involve mutual emotions and increased or decreased liking. Research on emotional contagion (Hatfield, Cacioppo, & Rapson, 1992) has shown that people who work together tend to converge emotionally over time (Barsade, 2002; Bartel & Saavedra, 2000). In addition, people generally like others who display positive rather than negative emotions (Brett, Olekalns, Friedman, Goates, Anderson, & Lisco, 2007; Van Kleef et al., 2004a). These fundamental processes are also evident in the leadership domain. Several laboratory experiments and field studies have indicated that a leader's emotional displays influence followers' emotions, liking of the leader, and perceived charisma (Bono & Ilies, 2006; Glomb & Hulin, 1997; Lewis, 2000; Newcombe & Ashkanasy, 2002). Thus, there is converging evidence that emotional displays influence observers' emotions and interpersonal liking. Because of the strong conceptual (Frida, 1994) and empirical (Bono & Ilies, 2006) correspondence between emotions elicited by someone and liking felt for someone, we focus on the joint effects of a leader's emotional displays on both team members' emotions and their liking of the leader, which we jointly refer to as affective reactions. We predict:

Hypothesis 1. A leader's displays of happiness arouse more positive affective reactions in team members than do displays of anger.

The task-relevant information pathway. Another way in which leaders' emotional displays may influence team performance—as suggested by the social functions perspective and the EASI (emotions as social information) model outlined above—is by providing task-relevant information (Van Kleef, in press). In general, emotional displays that occur in the context of interpersonal communication tend to be congruent with the positive or negative nature of the information that is being communicated (Keltner & Haidt, 1999). In leader-follower interactions, a leader's expressions of positive versus negative emotions may thus be seen as indicative of a positive or a negative state of matters, respectively. As such, a leader's emotional displays can be thought of as success or failure feedback that may influence followers' inferences regarding the quality of their performance (Gaddis

et al., 2004; Weiss & Cropanzano, 1996). Specifically, a leader's display of anger may signal that task progress is insufficient (Fitness, 2000), and a leader's display of happiness may signal that performance is satisfying (Martin, Ward, Achee, & Wyer, 1993). Drawing on this logic, we propose that:

Hypothesis 2. A leader's displays of happiness lead team members to make more favorable inferences regarding the quality of their performance than do displays of anger.

Competing Theoretical Perspectives

Is a team's performance likely to be better when its leader expresses happiness or expresses anger? The answer depends on which theoretical perspective is used. Specifically, if one adopts the perspective that team members will take a leader's display of anger as a sign that they performed inadequately and thus need to do better, and that the reverse will occur when a leader expresses happiness (Carver & Scheier, 1998; Martin et al., 1993; Sy et al., 2005), then team performance should be better when leaders express anger rather than happiness. On the other hand, if one adopts the perspective that leader displays of happiness elicit more positive affective reactions and engender more cooperation among team members than displays of anger (Barsade, 2002; Sy et al., 2005), then team performance should be better when leaders express happiness rather than anger.

How do we reconcile these divergent perspectives regarding whether a leader's happiness or anger more positively affects team performance? Drawing on the EASI model, we argue that the effect of leaders' emotions on their teams' performance depends on the teams' general level of *epistemic motivation*—that is, the extent to which team members desire to develop and maintain a rich and accurate understanding of situations (Kruglanski, 1989). When teams have high epistemic motivation, their members will pay attention to the meaning of emotion, and the task-relevant information pathway will be more potent. When teams have low epistemic motivation, their members will passively catch emotions, and the affective reactions pathway will be more powerful. In the following section, we draw on research on motivated information processing to develop the hypothesis that the effectiveness of leader displays of anger versus happiness depends on a team's motivation to consider the meaning and implications of its leader's emotions in the context of task performance. In doing so, we extend previous work by specifying

when positive versus negative leader emotional displays are more conducive to team performance.

Emotion and Information Processing

Numerous studies indicate that individuals may either process information in a quick, effortless, and heuristic way or do so in a more effortful, deliberate, and systematic manner (Chaiken & Trope, 1999). Whether individuals engage in such systematic and thorough information processing depends on their epistemic motivation (Kruglanski, 1989). Although epistemic motivation may vary as a function of the situation (including such features as time pressure, environmental noise, fatigue, and accountability), it is also strongly rooted in stable individual differences (De Dreu & Carnevale, 2003). Personality variables that tap into epistemic motivation include need for cognition (Cacioppo & Petty, 1982), need for cognitive closure (Kruglanski & Webster, 1996), fear of invalidity (Thompson, Naccarato, Parker, & Moskowitz, 2001), and personal need for structure (Neuberg & Newsom, 1993; Thompson et al., 2001). These constructs are strongly correlated and they have similar effects on information processing tendencies (De Dreu & Carnevale, 2003).

The effects of epistemic motivation have been investigated in a variety of contexts. Among other things, heightened epistemic motivation has been shown to decrease the selective use of information (Stuhlmacher & Champagne, 2000), discourage the use of stereotypes and heuristics (Fiske & Neuberg, 1990), focus information search on diagnostic information (Kruglanski & Mayseless, 1988), reduce the tendency to reject divergent opinions (Kruglanski & Webster, 1991), and increase the tendency to engage in systematic information processing (Mayseless & Kruglanski, 1987). Moreover, epistemic motivation may influence the processing of information conveyed by emotional displays. In two laboratory experiments and a field study, Van Kleef, De Dreu, and Manstead (2004b) demonstrated that negotiators only used the task-relevant information provided by their opponents' emotions to inform their negotiation strategies when they were sufficiently epistemically motivated.

Given these findings, we expect that the effects of a leader's emotional displays on team performance depend on the team's epistemic motivation. Our specific hypotheses are further informed by Forgas's (1995) affect infusion model (AIM), in which the influence of affective states on judgments and decisions depends on an individual's information processing strategy. When they adopt a heuristic processing style because of low epistemic motiva-

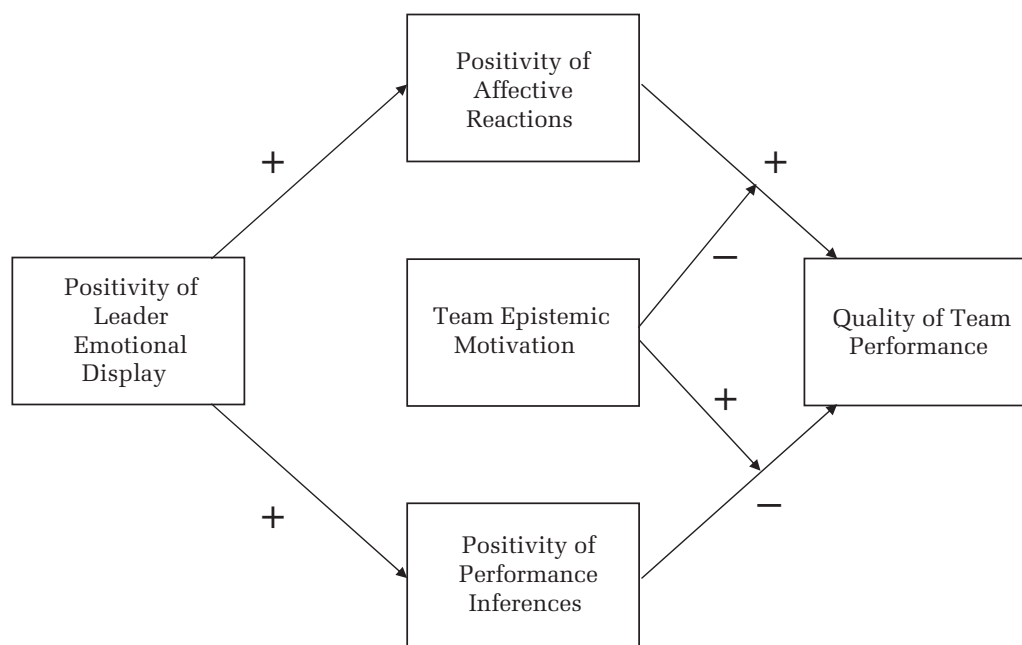
tion (De Dreu & Carnevale, 2003), individuals may directly base their behavior on their prevailing affective state (Schwarz and Clore's [1983] affect-as-information model is also of interest here). By contrast, when a more deliberate and motivated processing style is engaged—because epistemic motivation is high (De Dreu & Carnevale, 2003)—individuals rely less on their affective state but instead use other sources of information to guide their behavior, such as information provided by others' emotional displays (Van Kleef, in press; Van Kleef et al., 2004b; Van Kleef & Côté, 2007).

In view of these considerations, we predict that the relative impact of team members' performance inferences (compared to the impact of their affective reactions) on performance will increase to the extent that their epistemic motivation increases, because high epistemic motivation should lead teams to process the task-relevant implications of leaders' emotional displays in greater depth. Conversely, we expect that the relative impact of affective reactions (relative to the impact of performance inferences) on performance will increase as epistemic motivation decreases, because lower epistemic motivation should lead teams to rely more on their affective reactions and to think less about the task-relevant implications of leaders' emotional displays. Thus, we hypothesize:

Hypothesis 3. Team performance is more strongly predicted by performance inferences when teams have high epistemic motivation, whereas performance is more strongly predicted by affective reactions when teams have low epistemic motivation.

From the preceding rationale, we predict that a team's epistemic motivation moderates the relation between leader emotional display and team performance. When epistemic motivation is low, teams should be guided more strongly by their own affective reactions. Given that positive affect generally promotes performance on tasks that require more rather than less cooperation and coordination, whereas negative affect hampers performance on such tasks, we expect that leader displays of happiness result in better performance than leader displays of anger in teams with low (rather than high) epistemic motivation. Conversely, when epistemic motivation is high, teams should be guided more strongly by the task-relevant information they distill from their leader's emotional displays. On the basis of the hypothesis that leader displays of happiness elicit more favorable performance inferences than displays of anger, we expect that leader displays of anger will result in better performance than displays of happiness in teams with high

FIGURE 1
A Model of the Effects of Leader Emotional Displays on Team Performance



(rather than low) epistemic motivation. Thus, we predict:

Hypothesis 4. Leader displays of anger lead to better team performance than do leader displays of happiness when teams have high epistemic motivation, whereas leader displays of happiness lead to better performance than do leader displays of anger when teams have low epistemic motivation.

Figure 1 summarizes the model that we developed on the basis of the theory stated above.

METHODS

Sample and Task

The study was conducted at a large university in the Netherlands. Research participants were 140 master's degree students (53 male, 86 female, and 1 gender unknown) from the departments of business, economics, and psychology who participated in exchange for course credit or monetary compensation. Their mean age was 21 years (*s.d.* = 2.99), and 88 percent were Caucasian. Participants were randomly assigned to four-person teams.

We tested our model in the context of a team task that is characterized by a relatively high level of interdependence, given the need for team members to exchange information, make joint decisions, and coordinate their plans and actions. The task was a dynamic and networked computer simulation task

(MSU-DDD) that presents participants with a realistic and engaging teamwork experience that mirrors many real-life team tasks in important ways (Beersma, Hollenbeck, Humphrey, Moon, Conlon, & Ilgen, 2003; Ellis, Hollenbeck, Ilgen, Porter, West, & Moon, 2003; Hollenbeck et al., 2002; Homan, Hollenbeck, Humphrey, van Knippenberg, Ilgen, & Van Kleef, 2008; Moon et al., 2004). Specifically, MSU-DDD is a computer simulation of a military command-and-control situation in which team members work together to protect a restricted airspace from enemy intruders. Their task consists of working as a team to detect, identify, and disable enemy targets while avoiding disabling friendly forces. In the present version of the task, each team member controlled a different set of vehicles (i.e., they worked under a "functional" structure). Because the vehicles ranged widely in their capacities, interdependence among the team members was high (Moon et al., 2004). That is, in order to perform well, team members had to work together to effectively identify and engage targets. Each team worked together in a common room. Members were allowed to talk during the task at all times, and all teams made use of this possibility to exchange information and ask for assistance. In sum, as in many real-life organizational settings, team members had to make decisions and take independent actions while coordinating their plans and actions with their teammates. (For a detailed description of

the task, the reader is referred to Beersma et al. [2003].)

Procedures

Upon arrival at the laboratory, participants were welcomed and seated, and the experimental procedure was explained. Participants were told that the purpose of the study was to compare the effects of leadership via modern communication technologies with the effects of leadership via traditional live interaction between leader and followers. All participants then learned that they were in the “e-leadership condition,” which meant that their leader (a trained actor; see below) would observe and coach them from another room by means of cameras and a computer network. Such e-leadership is becoming more and more common as organizations increasingly rely on work teams comprised of members in different locations and/or supervised and coached by a leader who is not physically present, through videoconferencing or some other means (Cascio & Shurygailo, 2003).

After the supposed purpose of the study had been sketched, the experimenter explained that the leader had a master’s degree in management and was currently enrolled in an executive development program on leadership. Participants learned that the leader would supervise them as part of this program to gain more experience with e-leadership. It was also emphasized that the leader had extensive experience with the task participants were about to perform. The experimenter then pointed to the camera through which the leader would observe them during the task and explained that the leader would communicate with them via the computer network.

Past experimental research on leadership has successfully employed trained actors to enact experimental conditions (e.g., Bono & Judge, 2003; Kirkpatrick & Locke, 1996), including manipulations of emotional display (e.g., Bono & Ilies, 2006; Glomb & Hulin, 1997; Lewis, 2000; Tiedens, 2001). Following this precedent, we used a trained actor to create the experimental conditions so as to provide optimal experimental control. The same (male) actor enacted both the angry display condition and the happy display condition to rule out the possibility of spurious effects due to different actors (cf. Lewis, 2000). The actor was trained to show the different nonverbal behaviors required in both conditions while keeping his verbal behaviors constant (cf. Barsade, 2002; see below). After extensive training, the actor’s emotional speeches were videotaped. We chose to use video clips (rather

than having the leader appear live for all teams) to guarantee that the emotional display manipulation was identical for all teams within a condition, thus creating a perfectly controlled manipulation (Bono & Ilies, 2006; Glomb & Hulin, 1997; Lewis, 2000; Tiedens, 2001).

Assessment of epistemic motivation. Before participants were assigned to teams, we administered the 11-item need for structure scale (Neuberg & Newsom, 1993; Thompson et al., 2001) and coded participants’ responses so that high scores reflected high epistemic motivation. Ample research has validated this scale’s ability to distinguish among individuals with different chronic levels of information processing motivation (Moskowitz, 1993; Thompson et al., 2001), making it a reliable yet parsimonious measure of epistemic motivation (Neuberg & Newsom, 1993). The translated version of the scale that was used in the present study has been validated in prior work involving Dutch samples (Rietzschel, De Dreu, & Nijstad, 2007). Examples of scale items are, “It upsets me to go into a situation without knowing what I can expect from it”; “I enjoy the exhilaration of being in unpredictable situations”; and “I become uncomfortable when the rules in a situation are not clear” (for the full scale and for details about its psychometric qualities, see Neuberg and Newsom [1993]). Participants indicated their agreement with each item on a scale ranging from 1, “strongly disagree,” to 5, “strongly agree” ($\alpha = .87$).

Team formation and introduction of the leader. After the assessment of epistemic motivation, each participant was randomly assigned to a four-person team, which was then randomly assigned to either the angry display condition (18 teams) or the happy display condition (17 teams). Next team members were seated together in front of a large computer monitor. They learned that their leader was sitting in another room in the same building and that he would speak to them via a digital camera that was connected to the computer network. Specially designed software made it appear as though a live stream of the leader was being shown, but in reality the leader’s message had been prerecorded. Then the experimenter pushed a button on the computer, and a text box on the screen said “connection being established.” The experimenter explained to the participants that they would see their leader on the screen but that the leader could not see them at that point (the camera through which the leader allegedly monitored their behavior hung in the adjacent room, where the team would work on the experimental task). Shortly thereafter, the leader appeared on the screen. He briefly introduced himself, repeating some of the information the

TABLE 1
Means, Standard Deviations, and Correlations of the Focal Variables^a

Variable	Mean	s.d.	1	2	3	4
1. Positivity of leader emotional display	0.49	0.51				
2. Team epistemic motivation	3.24	0.35	.09			
3. Positivity of affective reactions	2.94	0.67	.85**	.14		
4. Positivity of performance inferences	2.92	0.89	.92**	.38*	.44**	
5. Quality of team performance	23,134.20	6,540.76	-.08	-.08	.39*	.02

^a $n = 35$; correlations with the emotional display manipulation dummy reflect the effect of this manipulation; the other entries are partial correlations (with the effect of the emotional display manipulation controlled for) reflecting associations between the constructs without the third variable influence introduced by the manipulation.

* $p < .05$

** $p < .01$

experimenter had given earlier. At the end of the introduction, he wished the team good luck with the task and announced that he would comment on their performance later on. All teams viewed the same introductory video of their leader, in which he displayed no emotions and spoke with a constant, neutral tone of voice.

Training. Teams were then trained for approximately 75 minutes. The first 20 minutes were devoted to familiarizing participants with the object of the simulation, its scoring, and the characteristics of the various vehicles employed in the simulation. The next 40 minutes of training concentrated on how to control the vehicles (e.g., moving them around the area, identifying and disabling targets). The final 15 minutes provided participants with an opportunity to practice their new skills in a trial task, during which performance was not recorded. All participants were thus extensively trained in performing all actions necessary to perform the task.

Manipulation of leader's emotional display. After the training and practice trial, the team members were again seated together in front of the computer monitor in the adjoining room. The experimenter then "established a connection" with the leader's computer, and shortly thereafter the leader appeared on the screen again. The leader then identified a number of aspects of the team's performance that could be improved. The leader's comments were rather nonspecific, so that they would be valid in all situations and for all teams regardless of the team's performance. For instance, the leader pointed to the importance of working fast, communicating efficiently, and engaging tracks accurately. He spoke exactly the same text in both emotional conditions, expressing either happiness or anger by means of facial expressions, vocal intonation, and bodily postures. In the happy display condition, the leader looked cheerful, spoke with an enthusiastic, upbeat tone of voice,

and smiled frequently. In the angry display condition, he frowned a lot, spoke with an angry and irritable tone of voice, clenched his fists, and looked stern (for similar procedures, see Barsade [2002], Bono and Ilies [2006], and Lewis [2000]). After the leader had given his comments, he either added that he was "really angry" or "really happy." Aside from this variation, the text was identical for both conditions, and the two clips were of equal length.

Performing the task. After the manipulation of the leader's emotional display, teams worked on the task for 30 minutes. During this session, each team, regardless of condition, experienced the exact same number, nature, timing, and sequencing of targets.

Dependent Measures

Table 1 provides means, standard deviations, and correlations of the focal variables.

Performance. Each team started the simulation with 50,000 points. They lost 1 point for each second that any unfriendly target was in the so-called restricted zone and 2 points for each second that an unfriendly target was in the "highly restricted zone." Teams also lost 25 points for disabling any friendly force or for disabling forces outside the restricted zone. Teams gained 5 points for each successful attack on an unfriendly target. The software that was used automatically integrates these measures into overall performance scores. Team performance in the present sample ranged from achieving 11,796 points to achieving 40,586 points.

Posttask questionnaire. After the team task, participants completed a questionnaire that included measures of affective reactions, inferences regarding quality of performance, and manipulation checks. This questionnaire was specifically developed for the present study since we were not aware of existing scales tapping into performance infer-

ences and affective reactions in a leadership context. Participants individually indicated their agreement with a number of statements (see below) using the same five-point scale described above.

First, affective reactions were assessed by 12 items, 6 of which measured emotional reactions (e.g., "The leader made me feel enthusiastic"; "The leader made me feel good"; "The leader made me angry," reverse-scored; "The leader made me feel bad," reverse-scored), and six of which measured liking of the leader (e.g., "The leader has made a positive impression on me"; "The leader appears to be a nice person"; "The leader struck me as an unlikable person," reverse scored). As anticipated, the two subscales correlated substantially ($r = .79$, $p < .001$), and we therefore combined them into a single index of affective reactions ($\alpha = .93$).

Subsequently, inferences regarding quality of performance were measured with five items (e.g., "I feel that the leader was satisfied with our performance"; "I feel that the leader had expected more of us," reverse-scored; "I feel that the leader thought we had performed poorly"; "I feel that the leader was disappointed in our performance," reverse-scored; $\alpha = .93$).

Finally, the manipulation of the leader's emotional display was checked using two separate scales, one for happiness and one for anger. Perceptions of the leader's anger were measured by four items (e.g., "The leader appeared angry after the training session"). The average rating on this scale was 2.78 (s.d. = 1.24, $\alpha = .97$). Perceptions of the leader's happiness were also measured by four items (e.g., "The leader appeared happy after the training session"). The average score on this scale was 2.80 (s.d. = 1.48, $\alpha = .95$).

Upon completion of the questionnaire, participants were thanked and thoroughly debriefed. Altogether, each experimental session took approximately two hours.

Analyses

When individual team member characteristics are used as predictors of team-level outcomes, the individual team member characteristics must be aggregated (Neuman & Wright, 1999). Participants in this study were randomly assigned to four-person teams. This means that aggregation of epistemic motivation could not be based on a direct consensus model, because no consensus is to be expected among the personality scores of a random set of people (Chan, 1998). Several scholars have argued that the appropriate aggregation of personality variables in such cases depends on the type of task (Barrick, Stewart, Neubert, & Mount, 1998;

LePine, Hollenbeck, Ilgen, & Hedlund, 1997; Moynihan & Peterson, 2001). Following these authors' recommendations, we examined the nature of the task to determine how epistemic motivation was to be aggregated to the group level. As this perspective is rooted in the theoretical works of Steiner (1972), we used his taxonomy to determine how to aggregate epistemic motivation. Steiner distinguished among disjunctive, conjunctive, and additive tasks (see also Neuman & Wright, 1999). Of Steiner's three categories, the additive model best represents the present task. Each team member had an equal level of responsibility and an equal share of input into the team's output, and all members had to work together to perform well. According to Steiner (1972), this fact alone makes a task additive. This situation is fundamentally different from that posed by a disjunctive task (e.g., problem solving), in which the team's best member determines the output of the team, and also fundamentally different from the situation posed by a conjunctive task (e.g., mountain climbing), where the team's weakest member determines the team's output. In light of the additive nature of the task, we used the average of the team members' scores to represent epistemic motivation at the team level (Barrick et al., 1998; Ellis et al., 2003; Moynihan & Peterson, 2001).

Because participants were randomly assigned to teams, there was considerable variability in the composition of the teams in terms of members' epistemic motivation. To gain insight into the composition of the teams, we classified individual team members as high (H), moderate (M), or low (L) on epistemic motivation on the basis of tertiles. This procedure revealed 11 different team compositions: 1 HHHH (i.e., a team consisting of four high-scoring members), 2 HHHL, 5 HHMM, 6 HHML, 4 HHLL, 2 HMMM, 4 HMML, 5 HMLL, 1 HLLL, 1 MMML, and 4 MLLL. Because authors have argued that it is important to control for such dispersion effects when using mean scores of personality (Klein & Kozlowski, 2000), we included the standard deviation of epistemic motivation as a control variable in our analyses (see also Homan et al., 2008).¹

¹ As per a reviewer's suggestion, we also tested whether these team compositions interacted with leader emotional display to predict team performance. Using the tertiles, we classified 11 teams as high (HHHH, HHHL, HHMM, or HHML) and 14 teams as low (HMLL, HLLL, MMML, or MLLL) on epistemic motivation. This classification yielded an interaction similar to the one reported in the main analyses below, although statistical power was reduced by the exclusion of the ten groups in the middle tertile ($\beta = -.76$, $t[21] = -1.99$, $p = .06$, $R^2 = .21$).

Manipulation checks, affective reactions, and inferences regarding quality of performance were also measured at the individual level and aggregated to the team level. Because participants were exposed to the leader's emotional displays *as a team*, aggregation of these measures was based on a direct consensus model (that is, some degree of consensus among team members is required to justify aggregation to the team level [Chan, 1998]). To examine whether aggregation was appropriate, we first calculated ICC(2) coefficients (i.e., indexes of interrater agreement [Shrout & Fleiss, 1979]) to test the reliability of team members' average ratings. ICC(2) values pertaining to the perceived anger scale (.96), the perceived happiness scale (.92), the affective reactions scale (.83), and the performance inference scale (.83) were adequate according to the standards proposed by Glick (1985), implying acceptable levels of agreement. Further support for aggregation was provided by r_{wg} coefficients (James, Demaree, & Wolf, 1984). The r_{wg} values for perceived anger, perceived happiness, affective reactions, and performance inferences were .83, .80, .84, and .72, respectively, representing satisfactory agreement (George, 1990; James et al., 1984). Finally, we calculated ICC(1) coefficients (Shrout & Fleiss, 1979) to examine the degree to which members of a team responded similarly to the leader's emotional displays. ICC(1) values pertaining to perceived anger (.85, $F[34, 105] = 23.23$, $p < .01$), perceived happiness (.75, $F[34, 105] = 12.75$, $p < .01$), affective reactions (.54, $F[34, 105] = 5.72$, $p < .01$), and performance inferences (.54, $F[34, 105] = 5.76$, $p < .01$) were well above the median level of ICC(1) reported in the organizational literature, which is .12 (James, 1982). Together, these data provide ample justification for aggregation of the individual-level measures to the team level.

The hypotheses were tested using hierarchical linear regression. Epistemic motivation was treated as a continuous variable. The leader's emotional display was dummy-coded (0 for anger and 1 for happiness), and the interaction between leader emotional display and team epistemic motivation was computed on the basis of centered variables (Aiken & West, 1991).

RESULTS

Manipulation Check

Regression revealed significant effects of the manipulation of the leader's emotional display on team members' perceptions of the leader's emotion. Teams in the angry display condition perceived the leader as angrier than did teams in the happy display

condition ($\beta = -.97$, $t[31] = -27.46$, $p < .01$, $R^2 = .95$), and teams in the happy display condition perceived the leader as happier than did teams in the angry display condition ($\beta = .96$, $t[31] = 20.83$, $p < .01$, $R^2 = .93$). Further, paired-sample t -tests revealed that ratings within the different emotional display conditions were higher for the intended emotion than for the other emotion: teams in the angry display condition rated the leader as more angry than happy (mean = 4.12 and mean = 1.74, respectively; $t[17] = 17.01$, $p < .01$), and those in the happy display condition rated the leader as more happy than angry (mean = 3.89 and mean = 1.40, respectively; $t[16] = 22.83$, $p < .01$). There were no main effects of epistemic motivation (perceived anger: $\beta = -.03$, $t[31] = -0.94$, n.s., $R^2 = .01$; perceived happiness: $\beta = .03$, $t[31] = 0.69$, n.s., $R^2 = .01$) and no interactions (perceived anger: $\beta = .05$, $t[31] = 0.96$, n.s., $R^2 = .01$; perceived happiness: $\beta = -.06$, $t[31] = -1.28$, n.s., $R^2 = .01$). Together, these results indicate that the manipulation of the leader's emotional display was successful.

Affective Reactions

Hypothesis 1 predicted that displays of happiness on the part of a leader will lead to more positive affective reactions than displays of anger. In support of this prediction, the results shown in Table 2 reveal that leader emotional display significantly predicted affective reactions, in such a way that displays of happiness instilled more positive affective reactions than displays of anger.

Performance Inferences

Hypothesis 2 predicted that displays of happiness on the part of the leader will elicit more favorable performance inferences than displays of anger. As can be seen in Table 2, leader's emotional display significantly predicted performance inferences. In keeping with the idea that displays of anger may signal insufficient performance, teams that were confronted with a leader who expressed anger felt that their leader was less satisfied with their performance than did teams that were confronted with a leader who expressed happiness.

Affective Reactions, Performance Inferences, and Epistemic Motivation

We showed above that leader emotional display influenced affective reactions and performance inferences, as predicted in Hypotheses 1 and 2. The next step in our analysis is to show that performance inferences predict team performance to the

TABLE 2
Results of Hierarchical Regression Analyses Pertaining to Hypotheses 1, 2, and 4^a

Variables	Affective Reactions	Performance Inferences	Team Performance
<i>Step 1: Control</i>			
Epistemic motivation standard deviation	-.09	-.13	-.03
Contribution to variance explained (R^2)	.01 (0.01)	.02 (0.02)	.00 (0.00)
<i>Step 2: Main effects</i>			
Epistemic motivation standard deviation	-.11	-.11	-.09
Leader emotional display	.88**	.91**	-.06
Epistemic motivation	.02	.10	-.08
Contribution to variance explained (R^2)	.77** (3.35)	.86** (6.14)	.02 (0.01)
<i>Step 3: Interaction</i>			
Epistemic motivation standard deviation	-.10	-.11	-.02
Leader emotional display	.87**	.91**	-.07
Epistemic motivation	.03	.11	-.04
Leader emotional display \times epistemic motivation	-.07	-.04	-.42*
Contribution to variance explained (R^2)	.00 (0.00)	.00 (0.00)	.17* (0.20)
Overall R^2	.78** (3.55)	.88** (7.33)	.19* (0.23)

^a $n = 35$. Standardized coefficients (β s) are reported; effect sizes (Cohen's f^2) are shown in parentheses. Leader emotional display was dummy-coded 0 for "anger" and 1 for "happiness."

* $p < .05$

** $p < .01$

extent that epistemic motivation is high, whereas affective reactions predict team performance to the extent that epistemic motivation is low (Hypothesis 3). To test this hypothesis, we computed interactions between epistemic motivation and performance inferences and between epistemic motivation and affective reactions, and we used these interactions to predict performance. Table 3 presents the results of this analysis.

As expected, the interaction between epistemic motivation and performance inferences significantly predicted team performance. To probe the significance of the simple slopes, we adopted the procedure outlined by Aiken and West (1991), who recommended testing the significance of simple slopes at one standard deviation below and one standard deviation above the mean of the second predictor. This procedure revealed that positivity of performance inferences was significantly, negatively related to team performance in teams with high epistemic motivation ($\beta = -.61$, $t[31] = -2.11$, $p < .05$), but not in teams with low epistemic motivation ($\beta = .31$, $t[31] = 1.38$, n.s.). That is, performance inferences were more predictive of performance to the extent that teams had high epistemic motivation. Figure 2 presents a graph of this interaction. The interaction between epistemic motivation and affective reactions also significantly predicted performance. Simple slopes showed that positivity of affective reactions was significantly, positively related to performance in teams with low

epistemic motivation ($\beta = .57$, $t[31] = 2.11$, $p < .05$) but was not so related in teams with high epistemic motivation ($\beta = -.37$, $t[31] = -1.20$, n.s.). Thus, affective reactions were more predictive of performance to the extent that teams had low epistemic motivation, as can be seen in Figure 3. These findings support Hypothesis 3.

Team Performance

We predicted that teams with high epistemic motivation would perform better when their leader expressed anger rather than happiness, whereas teams with low epistemic motivation would perform better when the leader displayed happiness rather than anger (Hypothesis 4). Regression statistics pertaining to this hypothesis are shown in Table 2. As predicted, the interaction between leader emotional display and team epistemic motivation, which is depicted in Figure 4, significantly predicted team performance. Both simple slopes were significant, revealing that teams with high epistemic motivation performed better when the leader expressed anger rather than happiness ($\beta = -.60$, $t[31] = -2.30$, $p < .05$), whereas teams with low epistemic motivation performed better when the leader expressed happiness rather than anger ($\beta = .69$, $t[31] = 2.07$, $p < .05$). Thus, Hypothesis 4 is supported.

The final step in our analysis was to establish whether the interactive effect of leader emotional

TABLE 3
Results of Hierarchical Regression Analyses
Pertaining to Hypothesis 3^a

Variables	Team Performance	
(a) Epistemic motivation, performance inferences, and team performance		
<i>Step 1: Control</i>		
Epistemic motivation s.d.	−.03	
Contribution to R^2	−.00	(0.00)
<i>Step 2: Main effects</i>		
Epistemic motivation s.d.	−.10	
Epistemic motivation	−.13	
Performance inferences	−.05	
Contribution to R^2	.02	(0.01)
<i>Step 3: Interaction</i>		
Epistemic motivation s.d.	−.05	
Epistemic motivation	−.14	
Performance inferences	−.06	
Epistemic motivation \times performance inference	−.39*	
Contribution to R^2	.15*	(0.19)
Overall R^2	.17*	(0.21)
(b) Epistemic motivation, affective reactions, and team performance		
<i>Step 1: Control</i>		
Epistemic motivation s.d.	−.03	
Contribution to R^2	−.00	(0.00)
<i>Step 2: Main Effects</i>		
Epistemic motivation s.d.	−.09	
Epistemic motivation	−.15	
Affective reactions	.14	
Contribution to R^2	.03	(0.03)
<i>Step 3: Interaction</i>		
Epistemic motivation s.d.	−.03	
Epistemic motivation	−.15	
Affective reactions	.11	
Epistemic motivation \times affective reactions	−.35*	
Contribution to R^2	.12*	(0.12)
Overall R^2	.15*	(0.16)

^a $n = 35$. Standardized coefficients (β s) are reported; effect sizes (Cohen's f^2) are shown in parentheses.

* $p < .05$

** $p < .01$

display and epistemic motivation on team performance was mediated by the interaction between epistemic motivation and affective reactions and/or the interaction between epistemic motivation and performance inferences (i.e., moderated mediation; for details regarding this procedure, see Hull, Tedlie, and Lehn [1992] and Muller, Judd, and Yzerbyt [2005]). First, including the interaction between epistemic motivation and affective reactions in the regression to predict team performance reduced the

formerly significant interaction between leader emotional display and team epistemic motivation to nonsignificance ($\beta = -.53$, $t[31] = -1.12$, n.s.). A Sobel test revealed that this reduction was significant ($z = 2.00$, $p < .05$). Second, entering the interaction between epistemic motivation and performance inferences in the regression to predict team performance reduced the previously significant interaction between leader emotional display and team epistemic motivation to nonsignificance ($\beta = -.57$, $t[31] = -0.91$, n.s.). A Sobel test revealed that this reduction, too, was significant ($z = 2.37$, $p < .05$). These findings provide additional support for our model, showing that epistemic motivation moderates the effects of leader emotional displays on team performance by leading teams to be guided more by their affective reactions (in the case of low epistemic motivation) or more by their inferences regarding the quality of their performance (in the case of high epistemic motivation).

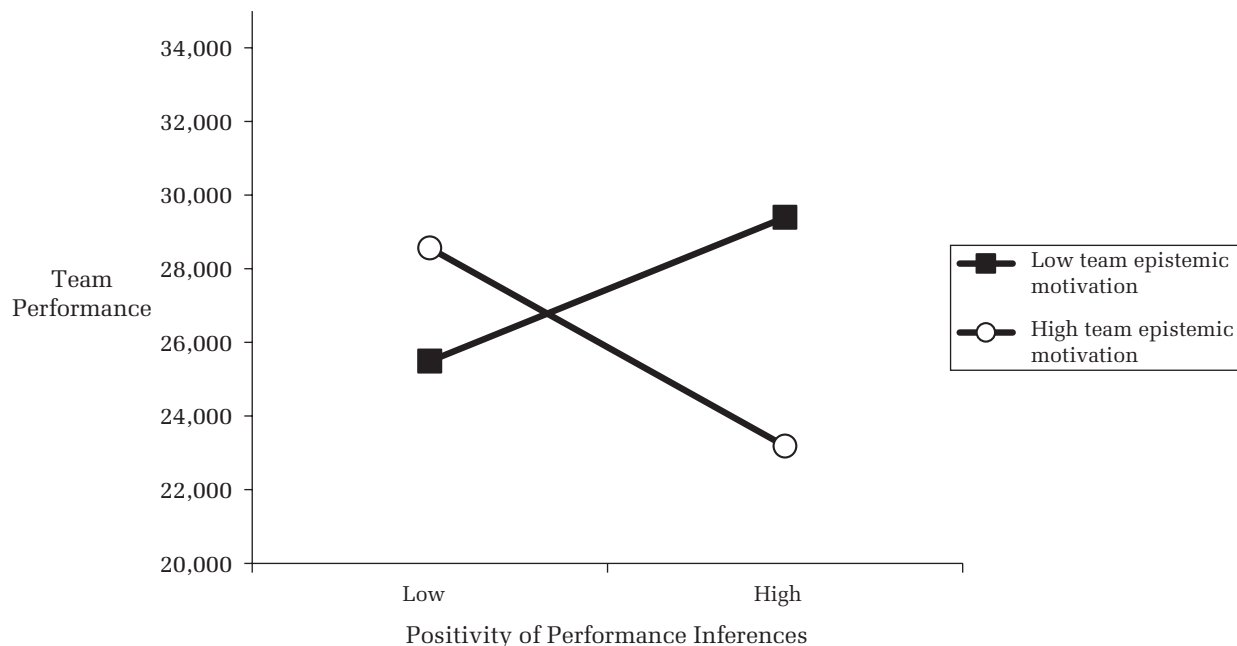
DISCUSSION

Taken together, our findings lead us to draw three main conclusions. First, a team's performance is influenced by its leader's emotional displays—specifically, the extent to which the leader conveys happiness versus anger. Second, the team's level of epistemic motivation determines whether its members use their own emotions as guides to their behavior (which is likely when their epistemic motivation is low) or instead use the emotional displays of the leader to guide their behavior (which is likely when their epistemic motivation is high). Third, the team's epistemic motivation determines whether leader displays of anger or happiness are more effective. Specifically, the tendency for team performance to be better after a leader displays happiness is stronger when teams are low in epistemic motivation (because they are guided by their affective reactions), whereas the tendency for teams to perform better after the leader displays anger is stronger when teams are high in epistemic motivation (because they are guided by their performance inferences). Next, we discuss the practical and theoretical implications of these conclusions, each in turn.

Leader Emotional Displays Influence Team Performance

Our first conclusion adds to the growing literature on emotions in organizations. Research in this area has mostly focused on *intrapersonal* effects, showing for instance that the emotions people experience influence their judgments, creativity,

FIGURE 2
Team Performance as a Function of the Positivity of Performance Inferences and Team Epistemic Motivation



helping behavior, turnover (exit) intentions, negotiation behavior, and general performance (for an overview, see Brief and Weiss [2002]). The present study shows that emotions can also exert influence

at the *interpersonal* level. If the interpersonal effects of emotions in the workplace parallel the intrapersonal effects in terms of the wide array of organizational outcomes they predict—which re-

FIGURE 3
Team Performance as a Function of the Positivity of Affective Reactions and Team Epistemic Motivation

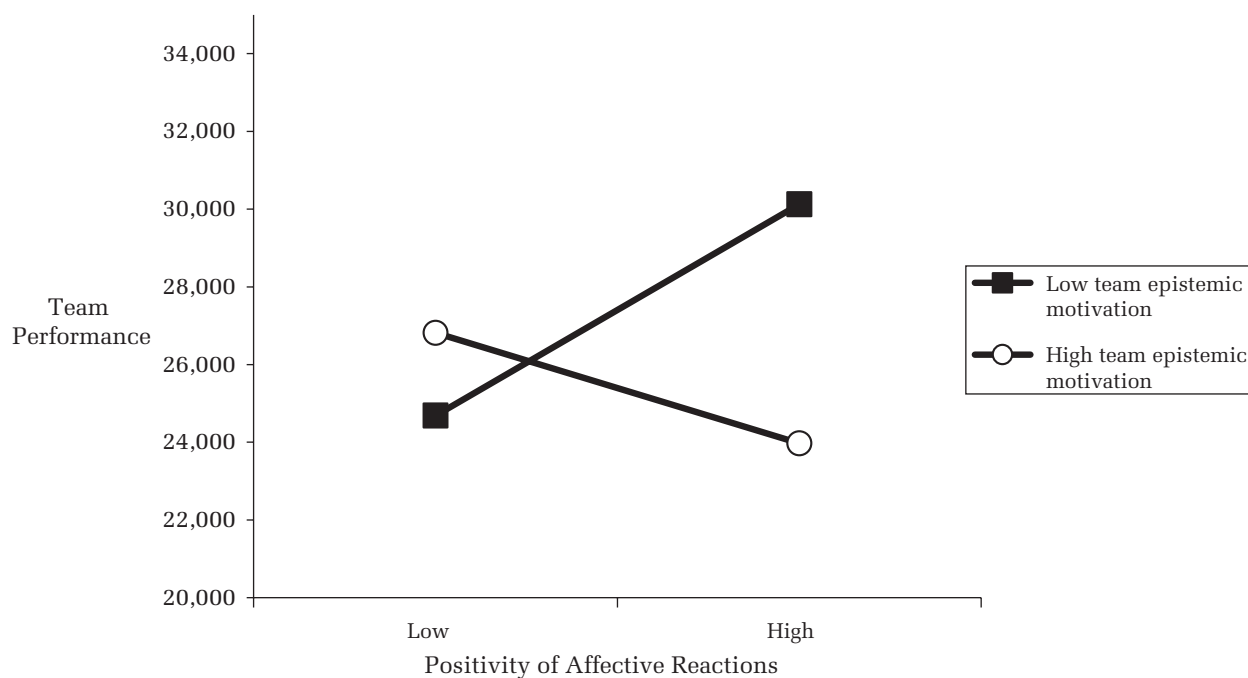
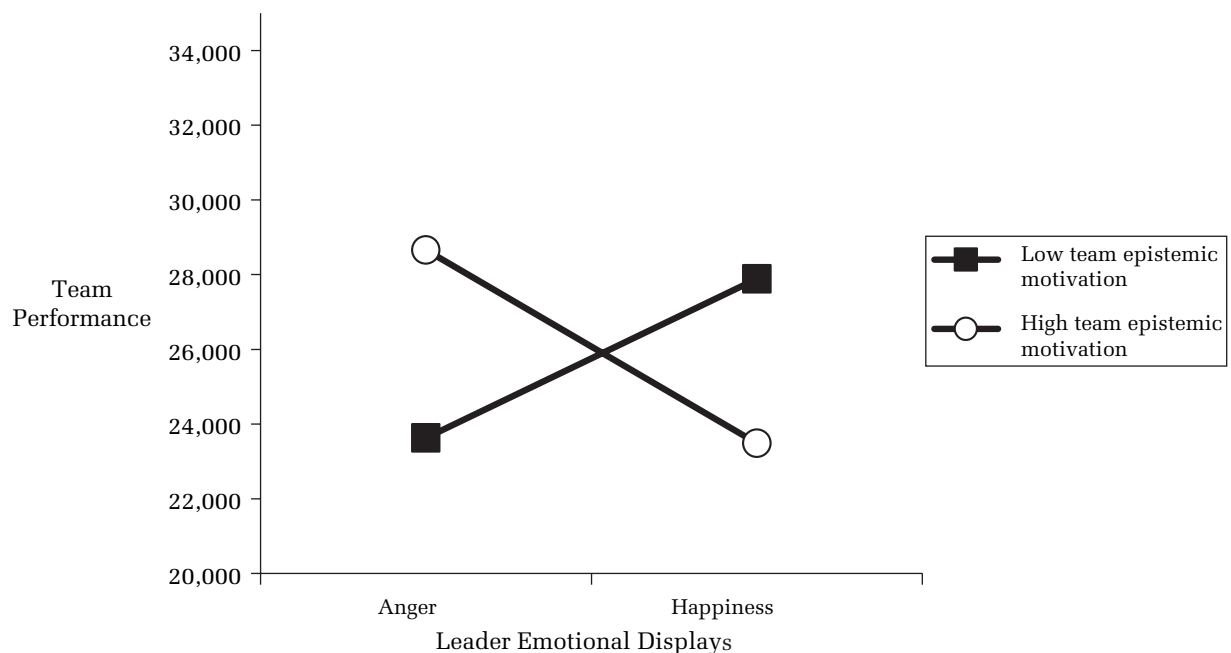


FIGURE 4
Team Performance as a Function of Leader Emotional Displays and Team Epistemic Motivation



mains to be seen—then, clearly, emotional displays are a factor to be reckoned with in organizations, not just in relation to leadership and team performance, but in relation to organizational outcomes more generally.

This conclusion is in line with a social-functional perspective on emotion (e.g., Keltner & Haidt, 1999), according to which emotions can exert interpersonal influence by eliciting reciprocal emotions in others or by conveying information (Ekman, 1993; Fridlund, 1994; Hatfield et al., 1992; Van Kleef, in press). In support of these notions, our results show that leader displays of anger elicit negative affective reactions in teams and signal insufficient task progress, whereas displays of happiness elicit positive affective reactions and signal adequate progress. Moreover, our findings extend the social-functional approach by showing that displays of anger and happiness can also affect *behavior* (i.e., team performance). Given that the emotions of high-power individuals are more likely to influence their low-power counterparts than vice versa (Keltner, Van Kleef, Chen, & Kraus, 2008), the implication is that emotional displays can be an effective part of a manager's repertoire of social influence tactics. We return to this issue below.

Epistemic Motivation Determines the Impact of Own Emotions versus Others' Emotional Displays

Our second conclusion constitutes a first step toward an integration of the literatures on intraper-

sonal and interpersonal effects of emotions, which have largely developed in isolation. Within the same setting, behavior may be guided by one's own or others' emotions, depending on one's epistemic motivation. This conclusion informs theorizing about affective influences on judgment and decision making, which has mostly focused on the intrapersonal effects of emotions (for an overview, see Forgas [2000]). Our finding that followers' inferences regarding the quality of their performance mediate the interpersonal effects of leader emotional displays on performance when epistemic motivation is high constitutes a unique contribution to this literature. A practical implication is that performance feedback should not be given in times of stress—when epistemic motivation is likely to be low—because employees are less likely to make good use of the feedback to increase their performance.

The finding that affective reactions are more predictive of performance when epistemic motivation is low has implications for theorizing on emotional contagion. The assumption underlying much of the work in this area is that emotional contagion coordinates social interaction (Hatfield et al., 1992; Keltner & Haidt, 1999), and team processes in particular (Barsade, 2002). This study identifies epistemic motivation as a boundary condition of the functionality of emotional contagion by demonstrating that emotional contagion is less relevant for team functioning when a team has high epistemic motivation. A practical implication of this conclu-

sion is that it is especially important for managers to ensure that team members are in a good mood when their epistemic motivation is low—when epistemic motivation is high, team members' emotions become secondary.

The Effectiveness of Leader Displays of Anger versus Happiness Depends on Follower Epistemic Motivation

Our third conclusion offers a way to reconcile inconsistent past findings, some of which have suggested that displays of anger are effective, and others, that displays of happiness are effective. Our results show that displays of anger are more effective to the extent that followers have high epistemic motivation, whereas displays of happiness are more effective to the extent that followers have low epistemic motivation. These findings have implications for contingency approaches to leadership effectiveness, which hold that the effectiveness of relationship-oriented versus task-oriented leadership styles depends on situational characteristics (Fiedler, 1996). To the extent that a relationship-oriented leadership style involves reacting positively to substandard performance and task-oriented leadership involves responding negatively, our findings suggest that the former style works better when followers have low epistemic motivation, whereas the latter style works better when followers have high epistemic motivation.

An important implication of this conclusion is that managers should match their emotional expressions to followers' epistemic motivation in order to maximize performance. Different strategies can be used to accomplish this. To the extent that organizations are aware of the chronic epistemic motivation of their employees—for instance, because the employees have filled out personality inventories during a selection procedure—the organizations can use this information to inform managers about emotional strategies that are more or less likely to be successful with particular employees. When no such information is available, managers may consider situational characteristics that affect epistemic motivation. For example, epistemic motivation is typically increased by personal involvement, task attractiveness, and accountability, and decreased by environmental noise, mental fatigue, and time pressure (De Dreu & Carnevale, 2003). Given the current findings, expressing anger would seem unwise in highly taxing conditions. For example, in the context of an increasingly high workload close to a deadline, managers might be advised to refrain from expressing anger toward their subordinates, for such expressions would be

unlikely to result in desired outcomes. In such situations, leaders may instead wish to display positive emotions to generate a positive atmosphere and put their subordinates in a good mood.

Regarding selection and training of leaders, our findings stress the importance of focusing not only on cognitive skills but also on socioemotional skills. First, leaders need to be aware that their emotional displays may influence team performance. Second, leaders must recognize situations that call for a positive emotional approach, just as they need to be able to identify situations that require a negative emotional approach. Third, leaders have to be able to regulate their emotions and tune their emotional expressions to the situation at hand (cf. Ashforth & Humphrey, 1993; Rafaeli & Sutton, 1987) and/or modify the situation so as to put their emotions to good use. Our findings suggest that leaders who are capable of accurately diagnosing their subordinates and situations, and of regulating their emotions accordingly, will be more successful in managing group processes and stimulating performance. When selecting leaders, managers should therefore consider characteristics and abilities that are predictive of such qualities, such as emotional intelligence (Salovey & Mayer, 1990). Furthermore, when assigning leaders to teams, managers may want to keep in mind the leaders' preferred emotional style and the type of work situation. Finally, training programs and leadership courses should devote attention to teaching prospective leaders these skills, as they may increase the leaders' effectiveness.

Strengths, Limitations, and Opportunities for Future Research

To enable causal conclusions regarding the impact of leader emotional displays on follower performance while ruling out alternative explanations, we chose to test our hypotheses in a controlled experiment. Given the laboratory context of the study, questions regarding the external validity of the findings may arise. In this respect, simulations such as MSU-DDD have been argued to bridge the gap between the laboratory and the field by allowing for high levels of mundane realism without sacrificing experimental rigor (Humphrey, Hollenbeck, Ilgen, & Moon, 2004). Indeed, our participants were highly involved in the task, suggesting that such realism was achieved. Furthermore, as Driskell and Salas noted, "Experimental research is generalized on the basis of the theoretical relationships that are tested, not through the concrete results of a single study" (1992: 113). Correlations between the effect sizes of such relationships ob-

tained in lab experiments and field studies (including leadership research) have been shown to be as high as .73 (Anderson, Lindsay, & Bushman, 1999), indicating that the conclusions derived from experimental studies closely mirror the conclusions derived from field studies (van Knippenberg & van Knippenberg, 2005). Indeed, past research on the role of leader emotional displays that employed both laboratory experiments and field studies has documented highly similar effects on competence ratings and status conferral (Tiedens, 2001), perceptions of charisma and leadership effectiveness (Bono & Ilies, 2006; Damen, van Knippenberg, & van Knippenberg, 2008), and follower satisfaction (Glomb & Hulin, 1997). We are therefore confident in predicting that the theoretical relationships uncovered in this study will generalize to other settings. Nevertheless, it would be interesting to test our model in a different setting and with a different sample in future research.

The objective of the present study was to investigate the effects of leader emotional displays on team performance. To this end, we selected a task specifically developed to study team functioning. A downside of this choice is that we have no data regarding the performance of individual team members. As a result, it is not clear whether our findings generalize to individual performance. Future research is needed to address this issue. On a related note, support for our model comes from one particular team task (MSU-DDD). We can therefore not exclude the possibility that the processes identified in the present study would play out differently in other tasks. One characteristic that might make a difference is the degree to which a task requires coordination and/or creativity (which are typically facilitated by positive affect) versus vigilance and analytical thinking (which are facilitated by negative affect [Forgas, 2000; Schwarz & Bless, 1991]). In the present task, coordination was crucial for successful task performance, which may explain why teams with low epistemic motivation performed well when their leader displayed happiness. An interesting question for future research is whether teams low in epistemic motivation perform better with an angry rather than a happy leader when the task emphasizes analytical thinking.

It is important to acknowledge that the present study did not include a nonemotional control condition. We decided not to include such a control condition because previous research had already demonstrated that positive and negative leader emotional displays affect followers in opposite ways (e.g., Sy et al., 2005). We therefore decided to focus on the questions of *when* and *why* displays of

anger and happiness affect follower performance by incorporating epistemic motivation in our model. Consequently, the present findings do not speak to differences between emotional and non-emotional leaders. The absence of a control condition prevented us from more completely testing notions of the fit versus misfit of leader emotional displays and follower epistemic motivation. Thus, although we can conclude from our data that leader displays of anger are more beneficial for performance than displays of happiness when teams have high epistemic motivation, we cannot know whether displaying anger is also more effective in enhancing performance than is displaying no emotion whatsoever. Likewise, even though our data indicate that displays of happiness are more conducive to performance than displays of anger when teams have low epistemic motivation, we cannot infer whether happiness is more or less effective than a neutral emotional display. Future research is needed to address these issues. In addition, future research could incorporate other emotions that are potentially relevant in relation to leadership and performance, such as agitation, disappointment, pride, and relief.

The present study employed newly developed measures of affective reactions and performance inferences in the context of leader-follower interaction. As these measures were employed for the first time, their validity has not yet been established. Future research is needed to test the validity of these measures. It would also be interesting for future research to explore the issue of interdependence in greater depth. Our theory suggests that positive affective reactions among team members are more conducive to team performance to the extent that interdependence is high. To address this issue, future studies could manipulate or measure the degree of task interdependence to see if interdependence moderates the effects of leader emotional displays.

A final issue concerns the temporal dynamics of the processes uncovered in the present study. It is conceivable that positive emotional displays are more effective in the early stages of team performance (for instance, as a way to instill positive expectancies and confidence), whereas negative displays are more effective in the later stages (for instance, to help maintain focus and signal potential problems [see Carver & Scheier, 1998]). Furthermore, it is important to realize that the present findings were obtained in the context of a relatively short-lived interaction. As a result, we do not know whether these effects persist over time. It could be that in certain situations one process becomes chronically more powerful than the other, for ex-

ample when a leader expresses anger too often. In this case, it is possible that the diagnostic value of the emotion decreases over time, while subordinates' negative affective reactions might build up. Future research is needed to explore these possibilities. Pending future work, we conclude that the impact of leader emotional displays on follower performance depends critically on follower epistemic motivation—a conclusion that may be vital for the successful management of emotion and organizational performance.

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